

3.7 LAND USE AND PLANNING, COMMUNITIES AND NEIGHBORHOODS, PROPERTY, AND ENVIRONMENTAL JUSTICE

This section evaluates the potential impacts of the No Project, Modal, and High-Speed Train (HST) Alternatives on land use compatibility, communities and neighborhoods, and property. This section also addresses environmental justice in accordance with the provisions of Executive Order (EO) 12898. This evaluation describes how existing conditions compare with the No Project Alternative and how the No Project Alternative compares with the potential impacts of the HST and Modal Alternatives, including a comparison among the HST alignment and station options within segments of the proposed HST system, in the five regions being studied.

3.7.1 Regulatory Requirements and Methods of Evaluation

A. REGULATORY PROVISIONS

Land Use, Communities and Neighborhoods, and Property

This section addresses the potential effects of each of the alternatives on existing and planned land uses. This section includes a discussion of the existing uses in and adjacent to areas where property acquisition may be needed for an alternative, an analysis of the changes to these uses which may occur with an alternative, a discussion of potential inconsistencies with land use plans, and identification of general mitigation strategies. The discussion of potential inconsistencies with planned land uses does not imply that the California High Speed Rail Authority (Authority), a state agency, would be subject to such plans or local ordinances, either directly or through the NEPA or CEQA process. The information is provided in order to indicate potential land use changes that could result in potential environmental impacts.

Environmental Justice

EO 12898, known as the federal environmental justice policy, requires federal agencies to address to the greatest extent practicable and permitted by law the disproportionately high adverse human health and environmental effects of their programs, policies, and activities, on minority populations and low-income populations in the United States. Federal agency responsibilities under this EO also apply to Native American programs. Department of Transportation (DOT) Order 5610.2 on environmental justice defines "disproportionately high and adverse effect on minority and low-income populations" to mean an adverse effect that is predominately borne by a minority population and/or a low-income population, or will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population (Department of Transportation Order 5610.2, Appendix Definitions, subd.[g]).

The California Government Code defines environmental justice as the "fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies" (California Government Code § 65040.12[e]). There are no specific state procedures prescribed for consideration of environmental justice issues related to the proposed HST system.

B. METHODS OF EVALUATION OF IMPACTS

The analysis was conducted using existing U.S. Census 2000 tract information/data compiled in a geographic information systems (GIS) format, local community general plans or regional plans, and land use information provided by the planning agencies in each of the regions. Existing and future conditions were described for the No Project Alternative by documenting existing information for

existing and planned future land use policy in potential alignment, potential station and existing airport areas, development patterns for employment and population growth, demographics, communities and neighborhoods, housing, and economics. The No Project Alternative was compared to the planned uses reflected in general plans and regional plans to see if it may result in potential effects on future development. The general and regional plans consulted for this section are listed in Chapter 12, *Sources Used in Document Preparation*.

The ranking systems described below were used to evaluate potential impacts for all three alternatives for land use changes, land use compatibility, and property. Potential impacts on communities and neighborhoods were also considered. The presence of minority populations and low-income populations in the study area for the alternatives was identified in order to consider potential environmental justice issues. Because this is a programmatic environmental review, the analysis of these potential impacts was performed on a broad scale to permit a comparison of relative differences among the alternatives. Further evaluation of potential impacts would occur at the project-level environmental review, should a decision be made to proceed with the proposed HST system.

Land Use Compatibility

The potential compatibility of the alternatives with existing land use is evaluated based on the potential sensitivity of various land uses to the changes which would be included with the Modal and HST Alternatives, and the potential impact of these changes on existing and planned land uses. For example, homes and schools are more sensitive to changes that may result in increased noise and vibration (see Section 3.4, *Noise and Vibration*) or increased levels of traffic congestion (see Section 3.1, *Traffic and Circulation*). Industrial uses, however, are typically less sensitive to these types of changes because they interfere less with normal industrial activities. Since in this analysis an area's sensitivity or compatibility is based on the presence of residential properties, low, medium, and high levels of potential compatibility are identified based on the percentage of residential area affected, the proximity of the residential area to facilities included in the Modal or HST Alternatives, and the presence of local or regional uses (such as parks, schools, and employment centers.). For highway corridors (under the No Project and Modal Alternatives) and for proposed HST alignments, land use compatibility was assessed using GIS layers (or aerial photographs where available) to identify proximity to housing and population, and to determine whether the alignments would be within or outside an existing right-of-way in the study area. Potential impacts are considered low if existing land uses within a potential alignment, station, airport expansion area, or maintenance facility area are found to be compatible with the land use changes that may result from either the Modal or HST Alternative. The type of improvement that would be associated with either the Modal or HST Alternative would also affect the level of potential impact. Improvements such as potential widening of an existing right-of-way or the need for new right-of-way were considered to have a low compatibility with agricultural land. Conversely, if the improvement would be contained within the existing right-of-way or within a tunnel, the alternative was considered to be compatible with agricultural land.

Future land use compatibility is based on information from general plans and other regional and local transportation planning documents. These documents were examined to assess an alternative's potential consistency with the goals and objectives defined therein. The Modal Alternative is considered compatible if the highway or airport improvement is in the regional transportation plan (RTP) or regional airport master plan. The HST Alternative is considered highly compatible if it would be located in areas planned for transportation multi-modal centers or corridor development, redevelopment, economic revitalization, transit-oriented development, or high-intensity employment. Compatibility would be considered low if an alternative would be potentially inconsistent with local or regional planning documents. Table 3.7-1 summarizes the potential compatibility rating of existing and planned land use types with the alternatives,

including potential HST alignment and station options. Thus, where potential compatibility would be rated low, the potential for impacts would be higher, and where potential compatibility would be rated high, the potential for impacts would be lower.

Table 3.7-1
Compatibility of Land Use Types

| Low Compatibility | Medium Compatibility | High Compatibility |
|--|---|---|
| Single-family residential, neighborhood park, habitat conservation area, elementary/middle school, agricultural (widened or new right-of-way needed) | Multifamily residential, high schools, community parks, low-intensity industrial, hospitals | Business park/regional commercial, multifamily residential, existing or planned transit center, high intensity industrial park, service commercial, commercial recreation, college, transportation/utilities, high-intensity government facilities, airport or train station, agricultural (tunnel or no new right-of-way needed) |

Communities and Neighborhoods

A potential impact on a community or neighborhood was identified if an alternative would create a new physical barrier, isolating one part of an established community from another and potentially resulting in a physical disruption to community cohesion. Improvements to existing transportation corridors, including grade separations, would not generally result in new barriers.

Property

Assessment of potential property impacts is based on the types of land uses adjacent to the particular proposed alignment, the amount of right-of-way potentially needed due to the construction type, and the land use sensitivity to potential impacts. Impacts include potential acquisition, displacement and relocation of existing uses, or demolition of properties. Potential property impacts were ranked high, medium, or low as summarized below in Table 3.7-2.

Table 3.7-2
Rankings of Potential Property Impacts

| Facility Requirements | Type of Development | | | | | | |
|---|---------------------|--------------------|-------|--------------------|---------------------------------------|---|-------------------------|
| | Residential | | | Non-residential | | | |
| | Rural/ Suburban | Suburban/ Urban | Urban | Rural Developed | Suburban Industrial/ Commercial | Urban Business Parks/ Regional Commercial | Rural Non- developed |
| No additional right-of-way needed (also applies to tunnel segments for HST Alternative) | Low | Low | Low | Low | Low | Low | Low |
| Widening of existing right-of-way required | Medium | Medium | High | Low | Medium | High | Low |
| New corridor (new right-of-way required; includes aerial and at-grade arrangements) | High | High | High | Medium | Medium | High | Low to medium |

To determine potential property impacts, the land uses within 50 feet (ft) (15 meters [m]) of either side of the existing corridor, or within 50 ft (15 m) of both sides of the centerline for new HST alignments, were characterized by type and density of development. Densities of structures, buildings, and other elements of the built environment are generally higher in urbanized areas. *Rural/suburban* residential refers to low-density, single-family homes. *Suburban/urban* is medium density, multifamily housing such as townhouses, duplexes, and mobile homes. *Urban residential* refers to high-density multifamily housing such as apartment buildings. *Rural developed* non-residential uses typically occur in non-urbanized areas and often include developed agricultural land such as vineyards and orchards. *Suburban industrial/commercial* refers to medium density non-residential uses and includes some industrial uses, as well as transportation, utilities, and communication facilities. *Urban business parks/regional commercial* refers to non-residential uses that occur in urbanized areas and includes such uses as business parks, regional commercial facilities, and other mixed use/built-up uses. *Non-rural undeveloped land* includes cropland, pasture, rangeland, and few structures. The classification of development types was based on land use information provided by the planning agencies in each of the regions.

Environmental Justice

This analysis is based on identifying the presence of minority populations and low-income populations in the study area (0.25 mi [0.40 km] from a potential alignment), and generally in the counties crossed by the alignments included in the alternatives. This assessment was done using U.S. Census 2000 information and alignment information to determine if minority or low-income populations exist within the study areas and if they do, whether the alignments would be within or adjacent to an existing transportation right-of-way (lower potential for impacts) or new alignments (higher potential for impacts).

Based on the above information, the analysis determined the following.

- Whether at least 50% of the population in the study area may be minority or low-income.
- Whether the percentage of minority or low-income population in the study area may be at least 10% greater than the average generally in the county or community.

The assessment of potential for impacts on minority and low-income populations considered the size and type of right-of-way needed for the alternatives. For example, if an alignment were within an existing right-of-way, the potential for impacts would be lower. If the alignment would be on new right-of-way, then the potential for impacts may be higher. The potential alignments, however, have been identified and described to largely use or be adjacent to existing transportation rights-of-way in order to avoid or reduce potential impacts on natural resources and existing communities to the extent feasible and practicable (see Chapter 2, *Alternatives*). Since this is a program-level document, the analysis considers the alternatives on a broad scale, including the proposed HST system as a whole. It is not expected that the proposed HST system as a whole would result in disproportionate impacts on minority or low-income populations. Additional analysis would take place during project-level analysis to consider potential localized impacts.

3.7.2 Affected Environment

A. STUDY AREA DEFINED

The study area for land use compatibility, communities and neighborhoods, property, and environmental justice, is 0.25 mi (0.40 km) on either side of the centerline of the rail and highway corridors included in the alternatives, and the same distance around stations, airports, and other potential HST-related facilities. This is the extent of area where either the Modal or HST Alternative might result in changes to land use; the type, density, and patterns of development; and socioeconomic conditions. For the property impacts analysis the study area is narrower—100 ft (30 m) on either side of the alignment centerlines—to better represent the properties most likely to be impacted by the improvements included in the alternatives (e.g., potential highway widenings or potential HST lines).

The planned land use for all regions is generally described by city and county general plans that encompass the alignments for the HST and Modal Alternatives. Several regulatory agencies and special districts also have future development plans that are considered in this analysis for lands these alternatives would cross. Communities have typically recognized and incorporated the existing rail and highway corridors in their general land use plans, and most communities encourage transit-oriented development and transit facilities to relieve highway congestion and improve mobility.

Other resources such as U.S. Census 2000 data, California Department of Finance data, aerial photos, and field observations were used to document existing and future (Year 2020) conditions for demographics, communities, and neighborhoods.

Figures 3.7-1 through 3.7-4 show the general land uses existing in each region.

B. DISCUSSION OF RESOURCES BY REGION

This section briefly describes the five regions the project would potentially traverse and briefly discusses the land use-related resources in the regions under the following five categories: existing and planned land use, population characteristics, income, neighborhood and community characteristics, and housing.

For this discussion, land use data came from local governments and regional agencies such as metropolitan planning organizations. The source of demographic information (existing population and projects, ethnicity, income, and housing) was primarily the California Department of Finance and U.S. Census 2000. This data, as well as existing and planned land use information, were compiled in a GIS format.

Bay Area to Merced

This region includes the San Francisco Bay Area (San Francisco and Oakland) south to the Santa Clara Valley and east across the Diablo Range to the Central Valley.

Existing Land Use: For most of the northern part of the region, the highway (US-101, I-80, I-880, and SR-152) and rail corridors that the Modal and HST Alternatives would use are existing transportation corridors surrounded by the built-up urban areas that they serve. Adjacent land uses are a mix of residential, industrial, commercial, and other urban uses. Industrial uses are concentrated around San Francisco International Airport (SFO) off US-101, Norman Y. Mineta San Jose International Airport (SJC), and Oakland International Airport (OAK). SFO and OAK are adjacent to San Francisco Bay. Commercial and residential uses are located to the southwest of SJC. The Don Edwards San Francisco Bay National Wildlife Refuge lies on the east side of the Bay, as discussed in Section 3.15, *Biological Resources and Wetlands*. The southern part of the US-101 corridor in this region includes some agricultural uses and rangeland. The segment of SR-152 between US-101 and I-5 passes through the Diablo Mountain Range and continues through Pacheco State Park, Cottonwood Creek Wildlife Area, and other open space, wildlife, and recreational areas. Agriculture and rangeland uses are prevalent east of I-5. Proposed HST alignment options would pass through the Diablo Mountain Range north of or through Henry Coe State Park and north of the Andersen Reservoir. HST options that are proposed farther south would pass through or by Gilroy through primarily agricultural lands.

Population Characteristics: The Bay Area to Merced region includes 13 counties: Madera, Merced, San Benito, Stanislaus, Santa Clara, Alameda, San Mateo, San Francisco, Contra Costa, Solano, Yolo, Sacramento, and San Joaquin. Population in this region grew from 7.6 million people in 1990 to 8.7 million in 2000, an increase of 14%. By 2020, population in the region is expected to reach 10.8 million, an increase of 23% over 2000 levels. According to U.S. Census 2000, minority persons, defined as non-white persons including persons of Hispanic origin, accounted for the following percentages of total population in the counties in the region (lowest to highest): Yolo 42%, Sacramento 42%, Contra Costa 42%, Stanislaus 43%, San Mateo 50%, Solano 51%, San Joaquin 53%, Santa Clara 53%, Madera 53%, San Benito 54%, San Francisco 58%, Alameda 59%, and Merced 60%.

Income: According to U.S. Census 2000, the average federal poverty threshold for a family of four with two children under the age of 18 is an annual income of \$17,603. The percentages per county of households identified as below federal poverty level in this region are (lowest to highest) San Mateo 6%, Santa Clara 8%, Contra Costa 8%, Solano 8%, San Benito 10%, Alameda 11%, San Francisco 11%, Sacramento 14%, Stanislaus 16%, Yolo 18%, San Joaquin 18%, Madera 21%, and Merced 22%.

Neighborhood and Community Characteristics: The portion of the region along the San Francisco Bay and southward into Santa Clara County is generally highly urbanized, and is characterized by a mix of residential communities, commercial, industrial, and public/institutional land uses. As the region continues south and east into the Central Valley, it includes undeveloped and agricultural areas, interspersed with suburban communities.

Sacramento to Bakersfield

This region of central California includes a large portion of the Central Valley (San Joaquin Valley) from Sacramento south to Bakersfield.

Existing Land Use: The existing land uses along the potential routes of the Modal and HST Alternatives in this region are predominantly agricultural, reflecting the Central Valley's heritage as one of the richest, most productive agricultural regions in the world (as discussed in Section 3.8, *Agricultural Lands*). Much of the land in the vicinity of the highway and rail corridors in the region proposed for improvements is cropland and orchards. Residential development comprises less than 10% of the land area, and commercial, service, and industrial uses together account for less than 10%. Development is focused in and around existing cities and towns where residential, commercial, and industrial uses are concentrated. Beyond city limits, land uses are predominantly agricultural, with scattered rural residences, small towns, and warehouse-style industrial development along the rail and highway corridors included in the Modal and HST Alternatives. Between Sacramento and Stockton, the easterly Central California Traction Company (CCT) alignment traverses more rural lands than the Union Pacific Railroad (UPRR). While much of the area between Stockton and Modesto is agricultural in nature, there are large residential tracts and smaller commercial areas along UPRR and, to a lesser extent, along the Burlington Northern Santa Fe (BNSF) alignment. South of Modesto to Merced, land uses are predominantly agricultural along the HST route that would follow BNSF. Near Merced Airport, a variety of government uses, many ranchettes, and rural residential or agricultural uses are located.

South of the City of Merced, the land uses mirror the predominant land use in this area of the valley: fragmented agricultural lands scattered with residences and a few small towns. As the UPRR rail alignment approaches the Fresno urban core, residential uses dominate the landscape to the east, and a mix of light industrial, heavy commercial, and open space line the stretch on the western side. Beyond industrial uses on the south side of Fresno, development becomes sparser, giving way to scattered rural residences and agricultural uses. Continuing into Tulare County, the various routes proposed for the Modal and HST Alternatives would pass farmlands and the Colonel Allensworth State Historic Park. South of this park all the way into Bakersfield, agriculture is the predominant land use, the only exception being small towns. Approaching Bakersfield, the rail alignments continue into the dense urban environment. At Bakersfield Airport, light industrial and heavy commercial uses line SR-99, with agricultural uses to the west.

Population Characteristics: The Sacramento to Bakersfield region includes nine counties: Sacramento, San Joaquin, Stanislaus, Merced, Madera, Fresno, Tulare, Kings, and Kern. In 2000, there were 4.6 million people living in this region. By 2020, the population is expected to increase by 46% to 6.7 million.

Throughout most of the region, the percentage of whites and Hispanics in the overall population by county is comparable (Fresno: whites 40%, Hispanics 44%; Kings: whites 42%, Hispanics 44%; Madera: whites 47%, Hispanics 44%; Merced: whites 41%, Hispanics 45%; and Tulare: whites 42%, Hispanics 51%). Counties that have non-agricultural industries or are within commuting range of the San Francisco Bay Area tend to have larger percentages of whites (e.g., Sacramento: whites 58%, Hispanics 16%; San Joaquin: whites 47%, Hispanics 31%; Stanislaus: whites 57%, Hispanics 32%; and Kern: whites 49%, Hispanics 38%).

Income: Per-capita income tends to be lower in communities that rely chiefly on an agricultural employment base. For example, Kings County, with a population of 129,500 in 2000, had a workforce of 45,880 people, 14% of which were unemployed, and an average per-capita income of \$15,492. Counties that have a more diversified economy (including industries such as oil, healthcare, and technology), such as Kern and Sacramento Counties, tend to support larger

workforces at higher average incomes. Sacramento County, with a population of 1.2 million in 2000, had a workforce of 605,500 people, only 4% of which were unemployed, and an average per-capita income of \$26,257.

The percentage per county of households identified as below federal poverty level (less than \$17,603 annually) in the Sacramento to Bakersfield region is (lowest to highest) Sacramento 14%, San Joaquin 18%, Stanislaus 16%, Kings 20%, Kern 21%, Merced 22%, Madera 21%, Fresno 23%, Tulare 24%.

Neighborhood and Community Characteristics: There are a number of established neighborhoods within the cities along the highways and roadways included as potentially feasible for modification under the Modal Alternative, and along the rail corridors proposed for HST Alternative alignments. There are also a number of older agricultural communities in the unincorporated portions of the counties.

Bakersfield to Los Angeles

This region of southern California encompasses the southern portion of the Central Valley south of Bakersfield, the mountainous areas between the Central Valley and the Los Angeles basin, and the northern portion of the Los Angeles basin from Sylmar to downtown Los Angeles.

Existing Land Use: Along SR-99 and I-5, the corridors relevant to the Modal and HST Alternatives, this region consists of three distinct sub-regions: north, central, and south. The northern portion of the region—from Bakersfield south to the northern base of the mountains—is largely agricultural until it enters the suburban mix of land uses in southern Bakersfield. The central portion of the region crosses the mountains and is characterized by rugged and largely undeveloped land. Much of this area is in national forest, and some is rangeland. A portion of the central segment passes through the high desert suburban communities of Palmdale and Lancaster. In the Santa Clarita area, some areas abutting proposed Modal and HST Alternative alignments are designated significant ecological areas (as described in Section 3.15, *Biological Resources and Wetlands*). The southern portion, extending from Sylmar to Los Angeles Union Station (LAUS), is an older, highly urbanized area characterized by a mix of residential, commercial, industrial, and public/institutional land uses. Burbank-Glendale-Pasadena Airport is located within this urban context.

Population Characteristics: The Bakersfield to Los Angeles region includes two counties: Kern and Los Angeles. Total population in the region increased from 9.4 million in 1990 to 10.2 million in 2000, an average annual growth of 0.8%. Population in Kern County increased by 118,000 people over that period, but the majority of the growth occurred in Los Angeles County, where population increased by 656,000 people between 1990 and 2000. Total population in the region is expected to increase to 12.7 million between 2000 and 2020, a 1% average annual growth rate. Los Angeles County is expected to contribute the majority (92%) to the forecast increase.

Minority persons, defined as non-white persons, accounted for 51% of Los Angeles County's population in 2000. Minorities accounted for 38% of the population in Kern County. The Hispanic population percentage in Los Angeles County is 45%; it is 38% in Kern County.

Income: Income in the region was \$20,363 per capita in 1999, and 18% of the population had incomes below the federal poverty level (\$17,603). In Kern County, per-capita income was \$15,760, with 21% of the population below the federal poverty level. In Los Angeles County, per-capita income was \$20,683, with 18% of the population below the federal poverty level.

Neighborhood and Community Characteristics: As noted above, the Bakersfield to Los Angeles study area consists of three distinct sub-regions: northern, central, and southern. The northern portion, extending from the northern toe of the mountains to Bakersfield, is largely agricultural until it enters the suburban mix of land uses in southern Bakersfield. The central portion crosses the mountains and is characterized by rugged and largely undeveloped land. Much of this area is in national forest. A portion of the central segment passes through the high desert suburban communities of Palmdale and Lancaster. The southern portion, extending from LAUS to Sylmar, is an older, highly urbanized area characterized by a mix of residential, commercial, industrial, and public/institutional land uses.

Los Angeles to San Diego via Inland Empire

This region of southern California includes the eastern portion of the Los Angeles basin from downtown Los Angeles east to the Riverside and San Bernardino areas and south to San Diego generally along the I-215 and I-15 corridors.

Existing Land Use: Existing land use in the LAUS to March Air Reserve Base (ARB) section of the study area in the region is largely developed. The major land use in this area is low-density residential. Combined residential uses comprise nearly 35% of the area adjacent to I-10, while industrial uses predominate along the railroad alignments under consideration for HST alignment options. Transportation and utility uses are present in or adjacent to both rail and freeway rights-of-way. Undeveloped land and commercial uses are also present. The majority of the surrounding land use is low-density residential in the proposed HST segment that would loop through San Bernardino. Industrial uses and undeveloped land comprise the next highest concentration.

Half of the segment between March ARB to Mira Mesa lies in Riverside County, and the other half is in the San Diego Association of Governments (SANDAG) planning area. Undeveloped land is the largest land use in the Riverside County portion of this segment, with agricultural use second. Within the southern section, undeveloped land also makes up the largest portion. Residential uses comprise the next highest land use, followed by agricultural uses. Transportation and utility uses define the land dedicated to the I-15 and I-215 corridors. The variety of land uses along the corridor between Mira Mesa and San Diego reflects the generally suburban nature of northern San Diego and the urban character of the city. Other than transportation-related uses, parks, undeveloped land, commercial, office, and military uses comprise the largest areas. Light industry and institutional uses are found along the proposed Miramar Road HST segment.

Population Characteristics: This region includes four counties: Los Angeles, San Bernardino, Riverside, and San Diego. The population of the region increased by 12% between 1990 and 2000, from 13.9 million people to 15.5 million. By 2020, population in this region is forecast to reach 20.4 million, a 31% increase.

Minority persons accounted for 51% of Los Angeles County in 2000, 35% of Riverside County, 41% of San Bernardino County, and 34% of San Diego County. Hispanic population accounted for 45% of Los Angeles County in 2000, 36% of Riverside County, 39% of San Bernardino County, and 27% of San Diego County.

Income: In Los Angeles County, per-capita income was \$20,683, with 18% of the population below the federal poverty level (\$17,603). In Riverside County, per-capita income was \$18,689, with 14% of the population below the federal poverty level. San Bernardino County had a per-capita income of \$16,865, with 16% of the population below the federal poverty level. San Diego County's per-capita income was \$22,926, with 12% of the population below the federal poverty level.

Neighborhood and Community Characteristics: The Los Angeles to San Diego via Inland Empire region consists of the older, urbanized areas of central and eastern Los Angeles County, the more recently urbanized portions of western San Bernardino and Riverside counties, the urbanizing areas of central and southwest Riverside County, the urbanizing areas of northwestern San Diego County, and the urbanized portions of the city of San Diego.

Los Angeles to San Diego via Orange County

This region includes the western portion of the Los Angeles basin between downtown Los Angeles and LAX, and the coastal areas of southern California between Los Angeles and San Diego, generally following the existing Los Angeles to San Diego via Orange County (LOSSAN) rail corridor.

Existing Land Use: This region is largely urbanized, with the exception of the Camp Pendleton military base between San Clemente and Oceanside. Between San Juan Capistrano and Del Mar, the existing train tracks run along beaches and through coastal communities. The major existing land uses in the study area in this region include single-family residential, commercial and industrial, transportation and utilities, and community parks.

Population Characteristics: The LOSSAN region includes three counties: Los Angeles, Orange, and San Diego. The region's population increased by 10% between 1990 and 2000, from 13.8 million persons to 15.2 million. By 2020, population in this region is forecast to reach 18.6 million, an increase of 23%.

Minority persons accounted for 51% of Los Angeles County in 2000, 35% of Orange County, and 34% of San Diego County. The Hispanic population is 45% in Los Angeles County, 31% in Orange County, and 27% in San Diego County.

Income: In Los Angeles County, per-capita income was \$20,683, with 18% of the population below the federal poverty level (\$17,603). Per-capita income in Orange County was \$25,826, with 10% of the population below the federal poverty level. San Diego County had a per-capita income of \$22,926, with 12% of the population below the federal poverty level.

Neighborhood and Community Characteristics: The proposed Modal and HST Alternative (HST and conventional rail) corridors would all pass through communities with similar characteristics. The corridors would cross the metropolitan area of Los Angeles, south Orange County, and the metropolitan area of San Diego. Communities in these areas have both common and unique characteristics shaped by a variety of political, physical, social, and economic factors. The Los Angeles metropolitan area can be characterized as a highly urbanized mix of single- and multifamily neighborhoods, with commercial and industrial development in such communities as Los Angeles, Norwalk, Fullerton, and Anaheim. The area is strongly influenced by the existing transportation network. The south Orange County area can be characterized as smaller communities with strong ties to the coastline. The communities comprise predominantly single-family neighborhoods with supporting commercial and industrial development. Communities such as San Juan Capistrano, Dana Point, and San Clemente represent this area. The San Diego metropolitan area can be characterized as a highly dense urban area rimmed by lower density suburban and coastal communities that have close interaction with coastal resources. Communities that represent this area are Oceanside, Carlsbad, Encinitas, Solana Beach, and Del Mar.

3.7.3 Environmental Consequences

A. EXISTING CONDITIONS COMPARED TO NO PROJECT ALTERNATIVE

Land use and local communities will change between 2003 and 2020 as a result of population growth and changes of economic activity in the five regions studied (see Chapter 5, *Economic Growth and Related Impacts*). The No Project Alternative is based on existing conditions and the funded and programmed transportation improvements that will be developed and in operation by 2020. Although it is expected that the No Project Alternative would result in some changes related to land use compatibility, communities and neighborhoods, property, and environmental justice, it was assumed that projects included in the No Project Alternative would include typical design and construction practices to avoid or minimize potential impacts, and would be subject to a project-level environmental review process to identify potentially significant impacts and to include feasible mitigation measures to avoid or substantially reduce potential impacts. Although some changes would be likely, attempting to estimate such changes would be speculative. Therefore, no additional potential impacts were quantified for the No Project Alternative.

B. NO PROJECT ALTERNATIVE COMPARED TO MODAL AND HIGH-SPEED TRAIN ALTERNATIVES

Land Use Compatibility

The Modal Alternative would be potentially incompatible with existing and planned land use in some segments to a greater extent than the No Project and HST Alternatives, because it would not be consistent with policies that support increased transit alternatives and reduced dependency on the automobile. The highway improvement options would support a dispersed pattern of development and would be inconsistent with local and regional planning objectives that promote transit-oriented higher-density development around transit nodes in order to encourage and increase planned in-fill for more efficient use of land and resources and sustainable growth.

The HST Alternative would include many potential new station locations, which were identified through consultation with local planning agencies and selected to be compatible to the extent possible with future planned land uses. Overall, the proposed HST Alternative would be highly compatible with local and regional plans that support rail systems and transit-oriented development. The HST Alternative would also provide improved inter-modal connectivity with existing local and commuter transit systems.

Communities and Neighborhoods

Similar to the No Project Alternative, the Modal Alternative would generally follow existing transportation corridors and rights-of-way, would not be expected to create new barriers within neighborhoods, and would not be expected to result in potential impacts on community cohesion. Though much of the HST Alternative would follow existing or planned transportation corridors, several alignment options would represent new transportation corridors. Along some of the potential alignments in all regions except the LOSSAN corridor, there would be potential for localized impacts on community cohesion, which would receive further study during project-level review, if a decision is made to proceed with the proposed HST system, and depending upon the alignments selected in the future.

Property

In the Bay Area to Merced and LOSSAN regions, potential right-of-way acquisition associated with transportation improvements under the No Project Alternative, such as the expansion of existing facilities and the construction of new facilities, could result in property impacts, which would be addressed in future project-specific environmental analyses prior to the implementation of these improvements. In the Sacramento to Bakersfield, Bakersfield to Los Angeles, and Los Angeles to

San Diego via Inland Empire regions, the No Project Alternative is not anticipated to have substantial property impact potential. The No Project Alternative, which includes currently programmed and funded improvements and the mitigation for impacts that would be provided with these improvements as a result of environmental reviews, is the basis for analyzing the potential Modal and HST Alternatives.

Potential property impacts in addition to those under the No Project alternative would be expected to be substantially greater under the Modal Alternative than under the HST Alternative. In urban areas, highways are generally more constrained by denser development (which would have a higher potential for impacts, including residential uses) than railways. Therefore, highway expansion would have greater potential for impacts on land uses than rail expansion. Highways in urban areas also generally use most, if not all, of their existing right-of-way and would require additional right-of-way for expansion. Under the Modal Alternative, 309 mi (497 km) of highway alignment (20% of total Modal Alternative highway alignment in the region) would potentially affect high-impact land uses, and 289 mi (465 km) of alignment (19% of total Modal Alternative highway alignment) would affect medium-impact land uses.

Under the HST Alternative, between 53 mi (85 km) and 88 mi (142 km) of rail alignment and station locations (between 7% and 11% of total alignment distance) would potentially affect high-impact land uses, and between 92 mi (148 km) and 145 mi (233 km) of track alignment and station locations (between 11% and 17% of alignment distance) would potentially affect medium-impact land uses. Commercial and industrial uses are typically located along railways, and these uses buffer residential development from the railroad. Also, in several of the rail corridors under consideration, rail activity could be expanded within the existing right-of-way and would not require additional right-of-way.

Therefore, the HST Alternative would have less potential to affect high-impact land uses than the Modal Alternative. The Modal Alternative would potentially result in more than three times the mileage of high impacts on land uses than the HST Alternative. This potential for more property acquisition and residential and non-residential relocation, and the costs associated with these activities, represents a significant difference between the Modal and HST Alternatives.

Environmental Justice

Many of the alignments included in the Modal and HST Alternatives would be located in existing transportation corridors, which would serve to reduce potential for significant adverse environmental impacts generally. This broad-scale analysis considers the wide variety of landscape types and land uses, both low-density rural areas and developed communities, which would be adjacent to either the Modal Alternative (which would include nearly 3,000 additional highway lane miles [4,828 km] and certain airport expansions) or the HST Alternative (which includes more than 700 mi [1,127 km] of potential alignment and station options). Considering the alternatives on a system-wide basis, it is not expected that either the Modal or HST Alternatives would result in disproportionate impacts on minority populations or low-income populations. In addition, along with the potential environmental impacts analyzed in this Program EIR/EIS, general mitigation strategies are assessed which would be expected to be used to reduce potential impacts, if a decision were made in the future to proceed with the proposed HST system. If a decision were made to go forward with the proposed HST system, project-level review would include more detailed analysis of any potentially significant environmental impacts and mitigation measures to reduce such impacts. Project-level review would include additional consideration of potential localized impacts on neighborhoods and communities, in addition to potential community enhancements and benefits from the proposed HST system.

3.7.4 Comparison of Alternatives by Region

A. BAY AREA TO MERCED

Land Use Compatibility

Modal Alternative: All of the highway improvement options for US-101, I-880, SR-152, I-80, and I-580 would be constructed within or adjacent to existing transportation corridors. These improvements would be highly incompatible with existing land use in the US-101 and I-880 corridors, which are immediately adjacent to many residential neighborhoods and commercial businesses.

The airport improvement options at SJC would occur mostly on existing transportation, industrial, and commercial properties. However, the potential construction of runways on the eastern side of the facility would be highly incompatible with nearby existing residential neighborhoods and Santa Clara University to the west.

The Modal Alternative highway improvement options would be highly incompatible with local and regional plans that have policies favoring increased transportation alternatives and reduced dependency on the automobile. For example, the highway improvement options would support a long-term dispersed pattern of development in the Bay Area to Merced region, which would be inconsistent with local and regional land use planning objectives that promote transit-oriented development around transit nodes as the key to more orderly and sustainable growth. However, the proposed aviation improvements at OAK and SJC would both be compatible with regional RTPs and local general plans addressing airport expansion.

HST Alternative: The Hayward/Niles/Mulford UPRR option would require additional rail track through the Don Edwards San Francisco Bay National Wildlife Refuge, and the northern tunnel and tunnel under park options would require the construction of a new transportation corridor from an eastern terminus north of Merced to the intersection with the Caltrain/UPRR corridor. All three options would potentially be highly incompatible with existing land use because these new corridors would primarily pass through agricultural land and parkland, although the extensive tunnels proposed with these options would avoid most potential parkland impacts. The minimize tunnel option would also require the construction of a new transportation corridor north of Merced, which would be incompatible with existing land use because it would cross at grade through a portion of Henry W. Coe State Park. The Gilroy bypass alignment option (Morgan Hill/Caltrain/Pacheco Pass alignment) would require the construction of a new transportation corridor from its eastern terminus north of Merced to the intersection with the Caltrain/UPRR corridor just north of Gilroy. The new section between the proposed Los Banos Station and the Caltrain/UPRR corridor would have low to moderate compatibility with existing land uses as it passes at grade through agricultural lands, including the Pacheco Creek Valley and Santa Clara Valley. The Gilroy alignment option (Caltrain/Gilroy/Pacheco Pass alignment) would have similar impact levels to agricultural land. Most proposed station sites would be consistent with existing land uses. However, the proposed Gilroy Station site would be potentially incompatible with existing adjacent low-density residential uses and historic structures. Its location, however, would be consistent with policies and actions stated in the Gilroy general plan (City of Gilroy 2002) that place a high priority on strengthening and restoring the downtown area, including the development of an active multi-modal transit center. All of the proposed station sites for the HST Alternative in this region are consistent overall with local and regional plans emphasizing the development of intercity rail service, transportation alternatives, and transit-oriented development. No potentially high impacts are identified in this region.

Communities and Neighborhoods

Modal Alternative: The Modal Alternative highway improvement options would be constructed within or adjacent to existing transportation corridors and are not anticipated to create new physical barriers that would divide neighborhoods or communities.

High-Speed Train Alternative: In locations where the HST Alternative would create a new transportation corridor (such as between San Jose and Merced), the alignment would primarily pass through agricultural or open space lands and would not result in community cohesion impacts in neighborhoods. In the San Francisco to San Jose segment, the corridor would be primarily within an existing active commuter and freight corridor and therefore would not constitute any new physical barriers that would divide neighborhoods or communities. Also, proposed grade separations would not create new barriers. In the San Jose to Oakland segment, the alignment options would be constructed in a tunnel, on an aerial structure, or within an existing rail right-of-way and would not create community cohesion impacts.

Property

Modal Alternative: The highest potential for property impacts due to Modal Alternative highway improvements would occur primarily in urbanized and built-up areas, such as US-101 between San Francisco and San Jose, I-80 between Oakland and Solano County, and most of I-880. Other areas of potential high impacts include the western portion of I-580, and I-80 in the Dixon area. In these locations, the existing facility is built out to the edge of the right-of-way; expansion of these facilities would require additional right-of-way and would have a greater potential for impacting the adjacent dense development.

The lowest potential for property impacts would occur in areas where the densities of development are lower, such as I-580 west of I-5, SR-152, and US-101 south of the San Jose area. Overall, about 140 mi (225 km) of highway alignment improvements (40% of total highway length in the region) would potentially result in high property impacts, and 54 mi (87 km) of alignment (15% of total Modal Alternative highway alignment in the region) would potentially result in medium impacts. About 158 ac (64 ha) around OAK and SJC would potentially result in high property impacts, and 533 ac (216 ha) would potentially result in medium property impacts (see Figure 3.7-5).

High-Speed Train Alternative: The proposed San Jose to Merced alignment options would require new right-of-way. However, since these alignments would traverse areas with agricultural or open space land uses, they would be expected to result in a low potential for property impacts on homes or buildings. Areas of potentially higher property impacts would be expected in built-up locations where the alignments would be located adjacent to the existing transportation corridor or in a new corridor. This would occur in San Francisco south of the proposed 4th and King Station on the Caltrain alignment, and north of the proposed San Jose Station on the I-880 alignment. Between 3 mi (5 km) and 11 mi (18 km) of rail alignment and station locations in the Bay Area to Merced region (between 1% and 5% of total alignment) would potentially result in high property impacts, and between 4 mi (5 km) and 9 mi (14 km) of alignment and station locations (between 2% and 5% of total alignment) would potentially result in medium land use impacts (see Figure 3.7-6). Overall, there would be a low potential for property impacts in this region because the rail improvements would be mostly contained within existing right-of-way or in new corridors that are in tunnels or traverse open space.

Environmental Justice

Modal Alternative: Substantial percentages of minority populations are located in the study area for the highway improvement options included in the Modal Alternative (with the exception of the I-580 corridor, which has 40%). For example, the US-101 corridor study area has 68% minority

population, I-880 68%, SR-152 60%, and I-80 65%. The OAK and SJC airport study areas both have minority populations of 54% in their study areas.

However, the potential for disproportionate impacts would be expected to be low because most of the highway expansion would occur in the existing right-of-way and would incorporate mitigation to reduce potentially significant adverse effects.

High-Speed Train Alternative: The HST Alternative study area in this region includes a variety of neighborhoods and a diverse multiethnic population. The study areas for all of the proposed HST alignment options have substantial percentages of minority populations. For example, the San Francisco to San Jose study area has a minority population of 52%, Oakland to San Jose 71%, and San Jose to Merced 64%. Significant minority populations were also identified in the vicinity of eight proposed station locations (Los Banos, Gilroy, Santa Clara, Union City, Auto Mall Parkway, Coliseum BART, 12th Street/City Center, and West Oakland). With the exception of the San Jose to Merced alignment, the alignment options would be along existing transportation corridors, and would not be expected to result in disproportionate impacts. Because San Jose to Merced would be a new alignment, there would be a somewhat higher potential for impacts, but impacts would be reduced through the inclusion of feasible mitigation measures.

High-Speed Train Alignment Options Comparison

The Merced to San Jose HST alignment options would be the least compatible with existing land use because these options would require the construction of a new transportation corridor from the eastern terminus near Merced to the intersection with the Caltrain/UPRR rail corridor. Land use compatibility ratings along these segments of the alignment options would range from low to medium. The minimize tunnel option in the Diablo Range direct alignment options would be the least compatible because it would cross at grade through a portion of the Henry W. Coe State Park. The Caltrain/Gilroy/Pacheco Pass alignment option would be the most compatible because it would extend further south to connect with the UPRR alignment and continue to a station at Gilroy. The Hayward/I-880 option would have a higher potential to impact residential property than the Mulford Line option. However, the Mulford Line option would impact the Don Edwards San Francisco Bay National Wildlife Refuge.

B. SACRAMENTO TO BAKERSFIELD

Land Use Compatibility

Modal Alternative: The Modal Alternative would include a wide range of highway improvements throughout the Sacramento to Bakersfield region, and expansions at the Sacramento and Fresno airports. The included changes to the transportation facilities would primarily occur at grade and involve widening of the major intercity travel routes, including changes on I-5, SR-99, SR-152, SR-33, I-80, and I-580 in this region. Because existing land use is predominantly agricultural and the improvements would involve widening of the existing right-of-way, the proposed highway and airport improvements would be potentially incompatible with surrounding land uses. About 44% of the land in the study area in this region is devoted to cropland and orchards, and more than half of the area along the roadways is designated for croplands and pasture. Residential land use comprises about 7%. About 9% of the land is designated for residential use, and a similar amount of commercial/services and industrial uses (about 7%) is proposed along the roadways.

Improvements that would involve widening of existing corridors would be potentially incompatible with future plans due to agricultural designation. The proposed widening of SR-99 would be potentially inconsistent with general plan policies that designate more than a third of land in this corridor for residential development. Similarly, more than half of the land along the I-5 corridor is designated for agricultural and natural open space uses, which would be considered

incompatible with roadway improvements. In some locations that have been designated for predominantly agricultural use, the highway improvements would have a potentially high incompatibility because they would be inconsistent with general plan policies to protect and maintain agricultural production.

Future land use around Sacramento International Airport is projected to be primarily transitional uses (uses other than residential and agricultural); therefore, airport expansion would be largely compatible with future plans.

High-Speed Train Alternative: The potential effects of the proposed HST alignments would be similar to those of the Modal Alternative in that the vast majority of the land uses along the proposed right-of-way are designated agricultural. Most segments in this region would require additional right-of-way for HST, and therefore would not be compatible with existing land use. The proposed Truxton (Union Avenue) Station site was also rated as having a high potential incompatibility with existing land use. The area around the proposed station site currently contains a high percentage of low-density residential development. This station would be located in the Tulare to Bakersfield segment on the UPRR corridor. The proposed Castle Air Force Base (AFB) station site would also not be compatible with existing agricultural uses. The site is also designated for agricultural use in the City of Merced's general plan (City of Merced 1997). Castle AFB is designated for redevelopment. In the Sacramento to Stockton segment, most of the land adjacent to the eight proposed alignment options has been designated for agricultural use in general plans. Four of these alignments also traverse a high percentage of land designated for residential use and therefore would be considered to have a high potential incompatibility with land use plans. Two of these alignments would use the UPRR corridor; the other options would use the CCT corridor. Both the UPRR and CCT alignments have options to link the Sacramento Downtown Station and the Power Inn Road Station with Stockton. In general, the CCT route tends to traverse slightly more land designated for residential and agricultural use than the UPRR route, which would make the CCT route potentially less compatible with future land uses.

Between Stockton and Modesto, the alignment option that would use the UPRR corridor would pass through an area designated for a large portion of residential use (UPRR alignment to Modesto Downtown Station) and would therefore be incompatible with future land use.

Communities and Neighborhoods

Modal Alternative: For much of the Sacramento to Bakersfield region, the highway component of the Modal Alternative would involve widening I-5 and SR-99 by two lanes. Communities in the urbanized portion of Sacramento could be affected by widening I-5, but for much of its length from Sacramento to Bakersfield, I-5 is bordered by agricultural uses or highway commercial uses set back from the right-of-way. Widening SR-99, if it occurs within the existing right-of-way, would not be expected to result in a detrimental physical division of existing communities, because the existing roadway already creates a physical separation between land uses on either side of the highway. However, there are instances throughout the region where the widening would require additional right-of-way and involve displacement of adjoining land uses. The displacement of these uses could potentially increase physical separation that already exists.

High-Speed Train Alternative: For much of the Sacramento to Bakersfield region, the proposed HST routes follow existing rail lines—UPRR, BNSF, or CCT. In many cases, smaller rural communities developed along the railroad tracks. In larger communities, the rail lines already divide the community. A parallel, at-grade set of tracks for HST would therefore not generally be expected to result in a substantial increase in physical separation which exists between land uses on either side of the tracks.

Property

Modal Alternative: The highest potential for property impacts due to potential highway improvements included in the Modal Alternative would occur in the urbanized areas along I-5 and SR-99 in the vicinity of Sacramento, Stockton, Modesto, Merced, Fresno, and Bakersfield. More specifically, there would potentially be high and medium property impacts on I-5 and SR-99 in the Sacramento area and on I-5 between Sacramento and Stockton. The majority of the high-impact areas include the portion of SR-99 between Sacramento and Merced. Other areas of potentially high property impacts include areas further south on SR-99 from SR-152 to Bakersfield. The area along I-5 between Stockton and SR-99 has the potential to result in medium impacts on property. Overall, approximately 52 mi (84 km) of highway alignment (8% of total Modal Alternative highway alignment in the region) would have a high potential for property impacts, and 92 mi (153 km) of alignment (15% of total Modal Alternative highway alignment in the region) would have a medium potential for property impacts. The lowest potential for property impacts would occur in less-developed and rural areas along I-5 and SR-99 (see Figures 3.7-7 and 3.7-8).

High-Speed Train Alternative: Under the HST Alternative, areas of potentially high property impacts would occur in the vicinity of urbanized areas where the alignments would be located adjacent to an existing transportation corridor. Between Sacramento and Stockton, the proposed easterly CCT alignment traverses primarily rural lands resulting in a low property impact potential. However, there is a small section of this corridor segment approximately 10 mi (16 km) south of the Power Inn Road Station site that would potentially result in high property impacts. The Power Inn Road Station site is located adjacent to an existing corridor and would result in a medium potential for property impacts. Other areas of potentially high and medium impacts are located between Stockton and Merced along both the UPRR and BNSF alignments. These potential impacts are due to new alignments impacting existing development and alignments located adjacent to existing corridors but outside the existing right-of-way, thereby impacting existing development.

The area from Merced to Fresno is largely agricultural land and therefore the potential to impact property is low. However, potential impacts on property along the UPRR and BNSF alignments directly north of the Fresno Downtown Station and continuing south to Bakersfield would be considered high to medium due to new alignments, and because the property is adjacent to an existing corridor. Between 20 mi (32 km) and 25 mi (40 km) of rail alignment and station locations (between 6% and 8% of total HST alignment in the region) would potentially result in high property impacts, and between 23 mi (37 km) and 67 mi (108 km) of alignment and station locations (between 7% and 20% of total HST alignment in the region) would potentially result in medium property impacts (see Figures 3.7-9 and 3.7-10).

Environmental Justice

Modal Alternative: For the Modal Alternative, minority populations were identified in the Modesto to Merced corridor. Communities in this corridor include Ceres, Keyes, Turlock, Delhi, Livingston, Atwater, and Merced. In this study area for this portion of the SR 99 alignment included in the Modal Alternative, the percentage of minorities is about 46%, compared to 35% in the region as a whole. In other corridors in the Sacramento to Bakersfield region, the percentage of minority populations is lower.

High-Speed Train Alternative: For the HST Alternative, minority populations have been identified near several potential station location options. These include the proposed stations and maintenance facilities locations in the Sacramento area (downtown Sacramento Valley Station, Power Inn Road BNSF and UPRR options, and the Sacramento Maintenance Facility BNSF and UPRR options); Stockton ACE Downtown Station; the Modesto Downtown Station; both Merced

station sites (Merced Downtown Station and Merced Municipal Airport Station); Fresno Downtown Station; Hanford Station; and Truxton stations (Union Avenue and Amtrak) in Bakersfield.

In addition, the alignment options between Merced and Fresno and from Tulare to Bakersfield would be expected to pass through areas with predominantly minority populations. The potential impacts, if any, for these communities would depend in part on the extent of new right-of-way that would be required for the HST Alternative. Where bypass options would be considered in addition to a mainline option, there would be greater potential for impacts.

High-Speed Train Alignment Options Comparison

The proposed Truxton (Union Avenue) Station site, which would be located in the Tulare to Bakersfield segment along the UPRR, is adjacent to a relatively high percentage of residential development, and the HST Alternative would be potentially incompatible with existing land uses. The Sacramento to Stockton corridor on the UPRR alignment is designated as predominantly agricultural and residential land uses, which would be potentially incompatible with the HST Alternative. The proposed UPRR alignment in the Stockton to Modesto corridor would also be incompatible with existing land uses due to proposed residential uses. In the Fresno to Tulare corridor, the proposed alignment along the BNSF route to Hanford Station would be potentially incompatible with existing land uses. In the Truxton to Bakersfield corridor, the proposed Truxton UPRR Station option and the main maintenance facility BNSF option would be potentially incompatible with the high percentage of land designated for future residential uses.

Minority or low-income populations exceeding 50% of the population as a whole, or 10% greater than the minority population in the community as a whole, were identified in the following alignment options and station study areas: all of the proposed sites for stations and maintenance facilities in the Sacramento to Stockton corridor, Modesto Downtown Station (Stockton to Modesto corridor on the UPRR alignment), all station areas in the Modesto to Merced corridor, Fresno Downtown Station area and all alignments in the Merced to Fresno corridor, Hanford Station area (Fresno to Tulare corridor on the BNSF corridor), Truxton (Union Station) and Truxton (Amtrak) Station areas, and most alignments in the Tulare to Bakersfield corridor.

In the Tulare to Bakersfield corridor, the proposed Truxton (Union Avenue) Station site would result in high land use incompatibility impacts. The Tulare express loop would somewhat reduce displacement impacts, but it would divide an established community.

C. BAKERSFIELD TO LOS ANGELES

Land Use Compatibility

Modal Alternative: The Modal Alternative includes potential highway improvements to I-5, SR-58, and SR-14. Widening that would require right-of-way outside of the existing corridor would be needed on most of the segments of I-5, as well as the segment of SR-14 between Palmdale and I-5. The widening of I-5 would be incompatible with the designated significant ecological areas (described in Section 3.15, *Biological Resources and Wetlands*) between SR-99 and SR-14 and other adjacent land uses. Similarly, the widening of SR-14 would be incompatible with existing agricultural and residential land uses.

The Modal Alternative would also include the expansion of the Burbank-Glendale-Pasadena Airport. Expansion of this airport would be incompatible with nearby residential neighborhoods as well as the local airport authority's plan to discontinue airport expansion.

High-Speed Train Alternative: Most of the proposed alignment options in this region would be constructed outside of existing transportation right-of-way, either highway or rail, and would

require new right-of-way. The new right-of-way would generally follow the existing transportation corridor. In these locations, the alignments would be potentially incompatible with existing land uses. These locations include the I-5/Wheeler Ridge alignment option because it would not stay consistently within the SR-184 corridor and would traverse single-family residential neighborhoods and agricultural lands. A similar situation would occur with the SR-58/Soledad Canyon corridor alignment. Other alignment options that would require new right-of-way include the Palmdale Station siding (a length of track for passing trains at the Palmdale Station) and the Metrolink/UPRR and combined I-5/UPRR options, including the I-5 Burbank downtown siding, I-5 downtown Burbank to LAUS (cut and cover at Silver Lake), I-5 downtown Burbank to LAUS (aerial at Silver Lake), LAUS existing siding, LAUS existing south, LAUS south siding, LAUS existing east, and east connection.

The proposed I-5 Tehachapi Mountain crossing would also be constructed outside of an existing rail transportation right-of-way. However, the alignment would follow the existing road transportation corridor, and it would be constructed mostly within tunnels. Therefore, it would be compatible with existing uses. The section along cut and fill near Tejon Lake in Castaic Valley may be inconsistent with potential Tejon Ranch plans to build low-density residential units on lands adjacent to Tejon Lake. Two proposed HST station sites, at Sylmar and Burbank, were considered incompatible with existing land uses because they would be located in neighborhoods with a high proportion of low-density residential uses. However, these stations would be consistent with local plans to encourage mixed-use development and focus development near transit stations.

Communities and Neighborhoods

For the Modal Alternative, the included highway improvements would occur in existing transportation corridors and therefore would not create new divisions or barriers in existing neighborhoods.

For the HST Alternative, the alignment options were anticipated to have an adverse impact on community cohesion if they would divide an existing neighborhood, resulting in decreased access within the community. The new Union Avenue corridor would pass through and divide an established residential area in southern Bakersfield.

Property

Modal Alternative: The highest potential for property impacts due to Modal Alternative highway improvements would occur primarily in urbanized areas. The northern portion of this region is largely agricultural, and the potential for property impacts would be low. The central portion of this region traverses the mountains and is largely rugged and undeveloped land. This portion also crosses the high desert, including the communities of Palmdale and Lancaster. Although this segment crosses these communities, land uses remain mostly rural. The potential for property impacts in this area would also be low. Portions of the Modal Alternative along I-5 that would traverse urban development would potentially result in medium to high impacts.

Upon entering the southern portion of this region (Sylmar to Los Angeles), the land uses become a mix of suburban uses. This portion of the region contains greater potential for medium to high property impacts. Overall, 13 mi (21 km) of highway alignment (6% of total Modal Alternative highway alignment in the region) would potentially result in high property impacts, and 24 mi (39 km) of alignment (11% of total Modal Alternative highway alignment in the region) would potentially result in medium property impacts. Approximately 107 ac (43 ha) of land around the Burbank-Glendale-Pasadena Airport expansion would have a high potential for property impacts, and 350 ac (142 ha) of land around the airport would have a medium potential for property impacts (see Figure 3.7-11).

High-Speed Train Alternative: Much of the proposed I-5 and SR-58/Soledad Canyon alignments would require new right-of-way. A large majority of these alignments traverse areas with open space or agricultural land uses and would be expected to have a low potential for property impacts. However, portions of these alignments would pass through urbanized areas and would therefore have a medium to high potential for property impacts, e.g., the Sylmar to Los Angeles segment, including the alignment along I-5 between Burbank Metrolink/Media City Station and the existing LAUS. Overall, between 4 mi (6 km) and 15 mi (24 km) of rail alignment and station options (between 3% and 11% of total HST alignment in the region) would potentially result in high property impacts, and between 4 mi (6 km) and 15 mi (24 km) of alignment and station locations (between 4% and 11% of total HST alignment in the region) would potentially result in medium property impacts. The higher numbers generally reflect inclusion of impacts along the Antelope Valley route (see Figure 3.7-12).

Environmental Justice

Modal Alternative: For the Modal Alternative, minority populations exist in the study area for the I-5 corridor from SR-14 to LAUS and along the SR-58/SR-14 corridor (with an average minority population percentage of 75%), and at other locations such as the I-5/SR-14 to I-405 and the SR-58/SR-14/SR-99 to Palmdale corridors. However, the highway improvements in these locations would be constructed within the existing right-of-way, which would reduce potential for adverse impacts. Potential for impacts would be greater where new right-of-way would be needed. The population of the study area around the Burbank-Glendale-Pasadena Airport comprises about 80% minorities. The need for additional right-of-way to expand the airport could result in potential impacts.

High-Speed Train Alternative: Minority populations are located in the study area at points along all of the alignment options. For example, the average percentage of minority population for the I-5 Tehachapi Mountain crossing (Wheeler Ridge and Union Ave), Palmdale Station location, and Soledad Canyon alignment is 73%. The potential for impacts would be greater for alignments that would be new transportation corridors. These segments include Wheeler Ridge corridor, SR-58 corridor, Palmdale Station, I-5 Burbank downtown station; I-5 Glendale, I-5 downtown Burbank to LAUS (aerial at Silver Lake), LAUS existing site, LAUS existing south, LAUS south, LAUS existing east, and the east connection.

Minority populations are present in the study areas for the proposed HST stations and the proposed Los Angeles maintenance yard site.

High-Speed Train Alignment Options Comparison

In the Bakersfield to Sylmar segment of the region, the proposed I-5 (Union Avenue and Wheeler Ridge) options would be potentially more compatible with existing land use than the SR-58 option because they would be either within tunnels or would not pass close to low-density residential uses or other sensitive uses, and they do not include proposed stations.

The Sylmar to Los Angeles segment includes two proposed alignment options: Metrolink/UPRR or combined I-5/UPRR. Most of the Metrolink/UPRR option would be within an existing rail transportation corridor. Of the three stations proposed for this option, only Burbank Downtown Station would be located in an area with a low percentage of residential uses. Therefore, this alignment option would be moderately incompatible with existing land uses.

There are three proposed alignment options in the downtown Burbank to Los Angeles segment of the region. The I-5 Burbank downtown station option would have potentially high incompatibility because most of this option would not be within an existing transportation corridor and would be above ground as it cuts through low-density residential neighborhoods. However, the proposed

I-5 downtown Burbank to LAUS (cut and cover at Silverlake) alignment would be potentially compatible because it would be constructed in tunnel. The proposed Metrolink/UPRR option would also have low incompatibility with existing land uses.

D. LOS ANGELES TO SAN DIEGO VIA INLAND EMPIRE

Land Use Compatibility

Modal Alternative: The Modal Alternative would include highway-widening improvements to I-10, I-15, I-215, I-15, and SR-163. Highway improvements in the LAUS to March ARB segment of the region would not be compatible with existing land use, which includes a high percentage of low-density residential development. Also, large portions of this segment are currently vacant and undeveloped. Expansion of the highway system would be expected to promote sprawl and low-density development and would not be compatible with local plans supporting high-density and transit-oriented development. Similarly, the segment between March ARB and Mira Mesa would also be incompatible with existing land use and future local plans. More than half of the study area in the Mira Mesa to San Diego segment consists of parklands or undeveloped land. Therefore, the highway improvements in this segment would be incompatible with existing land use and future land use plans.

The Ontario International Airport is located in the LAUS to March ARB segment. Expansion of this airport would be incompatible with existing nearby residential neighborhoods.

High-Speed Train Alternative: Most of the proposed alignment options would be located within or adjacent to existing or planned highway or rail corridors. Two of the three proposed alignment options (UPRR Colton Line and UPRR Riverside/UPRR Colton) from Los Angeles would be located adjacent to the UPRR corridor in urbanized areas, which would be compatible with existing land use. The third option (the loop through San Bernardino) would traverse low-density residential neighborhoods and would be potentially incompatible with existing land uses. However, the San Bernardino Station would be located in a redevelopment area, and the HST Alternative would be compatible with future planned uses at this location.

This region includes one proposed alignment option to connect March ARB with Mira Mesa, and two proposed options for passing through the City of Escondido. The Escondido at SR-78/I-15 Station option would traverse mainly vacant and agricultural lands. This alignment would be located in the existing I-15 corridor and would be moderately compatible with existing land use. For the second option (Escondido Transit Center Station), the largest single land use in the corridor is single-family residential, followed by multifamily and commercial and office space. Although the large presence of residential uses is less compatible with HST, the potential for intra-city connectivity at the existing Escondido Transit Center makes this alignment moderately compatible.

For the third segment connecting Mira Mesa with San Diego, there are three proposed alignment options. The variety of land use along the options via Carroll Canyon and to Qualcomm Stadium via the I-15 corridor reflects the suburban nature of northern San Diego. Undeveloped land and parkland comprise a significant share of the land use along the alignments. All three options would follow existing transportation corridors and therefore would be moderately compatible with existing land use. The alignment option via Miramar Road would not include any stations. The majority of surrounding land use is institutional. Secondary uses are light industrial and undeveloped land. Although the alignment would also traverse the Miramar Memorial Golf Course, it would be located within an existing transportation corridor; therefore, the alignment would be moderately compatible with existing land use.

The two proposed station sites that would be potentially incompatible with surrounding land uses are South El Monte Station and City of Industry Station. This potential incompatibility is due to the more agricultural and residential nature of the areas surrounding the station locations. The proposed Escondido Transit Center Station site would be potentially incompatible with its location in an area of existing residential uses; however, the site would be compatible with local land use plans that support transit development in this area.

Communities and Neighborhoods

Modal Alternative: The Modal Alternative is not anticipated to result in any community cohesion impacts because all of the improvements would occur in existing transportation corridors.

High-Speed Train Alternative: The HST Alternative is not expected to result in any community cohesion impacts because the proposed alignments under consideration would be located in existing transportation corridors and in tunnels.

Property

Modal Alternative: The highest potential for medium to high property impacts would occur in the developed Los Angeles area from Los Angeles to San Bernardino (along I-10). The edge of this right-of-way is densely developed with commercial and residential uses. High to medium property impacts would also potentially occur along I-10, I-15, and I-215 alignments due to residential development. Much of the area in the southern section of this region is occupied by undeveloped and agricultural land. Potential property impacts on those land uses would be low. Overall, 44 mi (71 km) of highway alignment (37% of total Modal Alternative highway alignment in the region) would potentially result in high property impacts, and 44 mi (71 km) of alignment (37% of total Modal Alternative highway alignment in the region) would potentially result in medium property impacts. The Ontario Airport and Lindberg Field expansions would affect 445 ac (180 ha) of high-impact land uses and 142 ac (57 ha) of medium-impact land uses (see Figure 3.7-13).

The major land uses between LAUS and March ARB Station consist of low-density residential buffered from nearby rail corridors by commercial and industrial uses. Much of the alignment is also assumed to be adjacent to the existing highway corridor in this section and therefore is expected to result in mostly high and some medium property impacts. The area from March ARB Station to Mira Mesa Station primarily consists of open space; therefore, potential property impacts would be low. However, there are several areas located adjacent to existing corridors and new alignments that have a potential for medium to high property impacts. Between Mira Mesa Station, Downtown San Diego Station, and the Qualcomm Stadium Station, urban development increases as the alignments travel south, resulting in the potential for medium to high property impacts. There would be a medium potential for property impacts if the Qualcomm Stadium Station were located on the eastern side near multifamily residences.

Between 28 mi (45 km) and 37 mi (60 km) of rail alignment and station locations (between 19% and 22% of total HST alignment in the region) would result in potentially high property impacts, and between 35 mi (56 km) and 54 mi (87 km) of alignment and station locations (between 23% and 33% of total HST alignment in the region) would potentially result in medium property impacts (see Figure 3.7-14).

Environmental Justice

Modal Alternative: Minorities comprise 58% of the population in the study area from LAUS to March ARB. From March ARB to Mira Mesa, the minority population is 27%, and from Mira Mesa to San Diego it is 37%. Because the widening of highways would occur within the existing right-of-way, the potential for impacts would be low; however, for improvements that would need new

alignment or required extensive additional right-of-way, the potential for impacts would be greater.

High-Speed Train Alternative: In this region, the HST Alternative would be located mostly within existing transportation corridors, which would limit potential the impacts on nearby communities, but potential for impacts would be greater where new right-of-way would be needed for an alignment option. Minority populations averaging 54% were identified along all of the proposed alignment options connecting Los Angeles to March ARB, including the Pomona (59%) and San Bernardino Station sites (59%), and the March ARB and Escondido Transit Center Station sites (68%) in the March ARB to Mira Mesa segment.

High-Speed Train Alignment Options Comparison

The UPRR Colton Line alignment option in the Los Angeles to March ARB segment and the I-15 alignment option in the March ARB to Mira Mesa segment would be moderately incompatible with existing land use. The Carroll Canyon alignment option in the Mira Mesa to San Diego segment also would be moderately incompatible with existing land use. However, these alignment options would be compatible with local plans. These alignments and station locations likely would provide better intercity to intra-city transit connections and would serve larger travel markets. Potential property impacts would be moderate in all of the Los Angeles to March ARB segments. In the Mira Mesa to San Diego corridor, the I-15-to coast via Carroll Canyon segment would have moderate potential property impacts, and the I-15 to coast via Miramar Road segment would have low potential property impacts.

E. LOS ANGELES TO SAN DIEGO VIA ORANGE COUNTY

Land Use Compatibility

Modal Alternative: The Modal Alternative would include the potential addition of nine gates at the Long Beach Airport and the widening of I-5 between Los Angeles and San Diego. The airport expansion would not impact surrounding land uses and would be compatible with existing and planned uses. The established I-5 corridor traverses urban and suburban mixed-use areas and crosses open space and coastal lagoons. The segments of I-5 under residential use are between Encinitas and Solana Beach, Oceanside and Carlsbad, Dana Point and San Clemente, and LAUS and Irvine. Because the highway corridor is established, it is considered compatible with existing land uses and with local plans that continue to recognize I-5 as a major transportation corridor throughout the region, and the improvements, which would be in the corridor, would also be compatible.

High-Speed Train Alternative: Proposed improvements to the LAUS to LAX segment would occur in an existing rail corridor. The existing land uses along this alignment are dominated by industrial and commercial development. Residential land uses in the study area are typically buffered from the rail by non-residential uses. Therefore, the proposed improvements would be compatible with existing and future land uses.

There are two alignment options that would travel south out of LAUS. The first option, connecting LAUS to Anaheim, would use the existing UPRR corridor. Existing land uses along this alignment consist of a mixture of industrial, commercial, and residential. This alignment includes a station option in a commercial area of Norwalk with residential use and a community park located on the opposite side of the rail corridor. With the proximity of the park, the station option would have medium compatibility with land use. However, the alignment and station are generally compatible with existing land use, and they would be compatible with local land use policies to promote the enhancement of transit services and reduction of dependency on automobile use for visitors and residents.

The second alignment option traveling south out of LAUS would connect LAUS to Irvine and would be located adjacent to the existing LOSSAN corridor. Improvements would be made at the existing stations (Norwalk, Fullerton, Anaheim, Santa Ana, and Irvine). Impacts on existing land uses along the alignment would be similar to those of conventional rail improvements along this section. The improvements proposed along the established rail route and around the existing stations appear to be compatible with existing and future land use.

The conventional rail improvements (non-electric) would use the existing LOSSAN corridor and connect LAUS to San Diego. Improvements would be made to the corridor and existing stations. Plans and policies of the communities located along the LOSSAN corridor generally promote the use of alternative modes of transportation that include rail, and conventional rail would be compatible with this alignment.

Two conventional rail (non-electric) alignment options have been proposed through San Juan Capistrano. The Trabuco Creek option would introduce a new rail corridor to the commercial and residential areas along the creek and could potentially result in noise, vibration, and visual impacts on existing land uses west and east of the proposed alignment, particularly on residential areas to the west (see Section 3.4, *Noise and Vibration*, and Section 3.9, *Aesthetics and Visual Resources*). The I-5 tunnel alignment option would be compatible with existing and future land use. A benefit of both alignment options is that they would remove the existing rail and avoid future rail-related impacts on the historic Los Rios neighborhood and downtown historic structures (see Section 3.12, *Cultural and Paleontological Resources*).

Three conventional rail (non-electric) alignment options were evaluated in the Dana Point/San Clemente area. The Dana Point curve realignment associated with the short tunnel option would have potentially high impacts on existing and future land use on a 31-ac (13-ha) site owned by the South Coast Water District. The rail realignment associated with the short tunnel option would conflict with the three land use alternatives that have been proposed for this site and analyzed in an EIR certified by the Water District (November 2002). This alignment would be compatible with existing land use, but not with future land use plans.

Two conventional rail (non-electric) alignment options were evaluated for the Encinitas area. The at-grade with vehicular and pedestrian grade separations option and the short trench with grade separations options would involve similar vehicular grade separations with pedestrian crossings at selected locations along the route, improving existing access. The short trench option would provide a covered trench section through the downtown area, allowing for better access between land uses. These alignments would be compatible with existing and future land uses.

In the Del Mar area, the conventional rail (non-electric) I-5 tunnel alignment option would remove the existing crossing of the rail corridor through the Los Peñasquitos Lagoon. The option, however, would result in potential to create noise, vibration, and visual impacts on the residential development on the south side of the Lagoon (see Sections 3.4 and 3.9). This alignment would not be compatible with existing land use. The Camino Del Mar tunnel option would involve a grade separation of the rail and road system. It would remove the existing track from the bluffs and separate the rail from low-density residential land use. This alignment would be compatible with existing and future land use.

Communities and Neighborhoods

Modal Alternative: The Modal Alternative would widen an existing transportation corridor around which neighborhoods and communities have been established. Since the corridor already exists, it is not expected that this alternative would divide any existing neighborhoods or otherwise substantially change the nature of the communities in the area. Improvements at the Long Beach Airport would have no impact on existing neighborhoods.

High-Speed Train Alternative: Under the HST Alternative, no new physical barrier to neighborhood interaction would be created. The existing residential areas along the alignment were developed with the railroad already in place, and the proposed HST system would not increase the barrier effect. Because the entire alignment would be grade separated, existing barriers at intersections with major cross streets would be eliminated, which would be a beneficial impact. The proposed conventional rail alignments would eliminate grade crossings in San Juan Capistrano, San Clemente, Del Mar, Encinitas, Carlsbad, and Santa Ana.

Property

Modal Alternative: The highest potential for property impacts due to Modal Alternative highway improvements would occur primarily in developed, urbanized areas. The LOSSAN region is primarily urbanized and consists of residential, commercial, and industrial land uses. High to medium property impacts are anticipated along I-5 from Los Angeles to San Juan Capistrano, and along I-5 from San Juan Capistrano to San Diego. The Camp Pendleton area along I-5 is undeveloped, and the alignment in this area would have a low property impact. There is potential for high property impacts along 59 mi (95 km) of highway alignment (28% of total highway alignment in the LOSSAN region) and potential for medium property impacts along 75 mi (121 km) of alignment (36% of total highway alignment distance in the LOSSAN region). The Lindberg Field expansion would affect 438 ac (177 ha) of high impact land uses and 10 ac (4 ha) of medium impact land uses (see Figure 3.7-15).

High-Speed Train Alternative: Under the proposed HST Alternative, no more than 2 mi (3 km) of rail alignment and station locations (1% or less of total alignment distance in the LOSSAN region) would have a high potential for property impact, and no more than 2 mi (3 km) of alignment and station locations (1% or less of alignment distance in the LOSSAN region) would have a medium potential for property impacts. The impacts would occur primarily in the vicinity of the LAX, Anaheim, and San Juan Capistrano Stations, and between Solana Beach Station and University Towne Centre Station sites. These impacts would be due to new alignments within this region (see Figure 3.7-16). However, because HST alignment options would use existing right-of-way, the overall potential for property impacts would be reduced. Similarly, the use of conventional rail alignments in existing right of way would reduce potential property impacts.

Environmental Justice

Modal Alternative: A high percentage of minorities live within 0.25 mi (0.40 km) of I-5 in Los Angeles County. The minority population in this area is about 72%, slightly higher than the Los Angeles County average of 69%. The Modal Alternative would involve widening the existing established transportation corridor and would have low potential for impacts.

HST Alternative: The minority populations around the proposed Norwalk (UPRR corridor) and Anaheim Stations are approximately 81% and 59%, respectively. The Norwalk Station would be located along an existing rail corridor. The proposed new station at Anaheim would be underground. The potential for impacts at these stations would be low.

Minority populations were also identified in the study area along the proposed LAX to LAUS (99%) and LAUS to Irvine alignments (74%). However, the potential for impacts along these alignments would be expected to be low because the proposed alignments are along existing operating rail corridors, and because residential land uses located within 0.25 mi (0.40 km) of the rail corridor are typically buffered from the rail by non-residential uses.

Significant minority populations exist along the proposed LAUS to Irvine alignment (74%), and around the existing San Juan Capistrano Station (66%). However, the potential for impacts along these alignments would be expected to be low, because potential improvements would

occur along an existing operating rail corridor, and because residential uses that are located within 0.25 mi (0.40 km) of the rail corridor are typically buffered from the rail by non-residential uses.

High-Speed Train Alignment Options Comparison

For the HST Alternative, the alternative routing options for high-speed rail between LAUS and Irvine present approximately the same potential for impacts related to land use. Because both options would occur within existing right-of-way, both options would have a low potential for impacts on existing land use. These impacts would be similar to those of conventional rail in this alignment. The LOSSAN corridor alignment would have higher potential connectivity and accessibility and compatibility with existing and planned development.

Alignment and station options along the conventional rail alignment are discussed below.

San Juan Capistrano: The I-5 tunnel option would require property/easement acquisition at the transit areas on either end of the tunnel. It would have the fewest impacts on residential land uses but would leave the city without a station. The Trabuco Creek option would introduce a new rail corridor to the commercial and residential areas along the creek. However, impacts on surrounding land use would be minimized by locating the rail adjacent to non-residential uses for most of the route. Both the Trabuco Creek and I-5 options would improve existing access between the historic Los Rios neighborhood (see Section 3.12, *Cultural and Paleontological Resources*) and downtown by removing the existing tracks from service.

Dana Point/San Clemente: The short tunnel option would remove the existing impact of the rail on the coastline and would require property acquisition and infrastructure relocation. The rail realignment that would be needed for this option would be inconsistent with the land use alternatives studied in the San Juan Creek Property Draft EIR (South Coast Water District 2002), resulting in potential infrastructure relocation and property acquisition. The long (single-tunnel) option would provide a station site and a lesser impact on existing and future land uses because the alignment would be contained within tunnel.

Encinitas: Both the at-grade trench with vehicular and pedestrian grade separations option and the short trench with grade separations option would provide an improvement to existing access by grade separating major intersections and providing pedestrian crossings.

Del Mar: The Camino del Mar tunnel option would have the least impact on adjacent land use and would improve coastal access by removing the existing tracks on the bluffs. The I-5 tunnel option would remove the existing rail crossing through the Los Peñasquitos Lagoon but would impact residential development.

3.7.5 Mitigation Strategies

The analysis in this Program EIR/EIS compares potential impacts from the alternatives and the HST alignment, station, and maintenance options. Potential impacts have been considered on a broad scale and on a system-wide basis. If a decision is made in the future to proceed with the proposed HST system, project-level review would analyze the potential for localized impacts.

A. LAND USE COMPATIBILITY

Local land use plans and ordinances would be further considered in the selection of alignments and station locations. Project-level review would consider consistency with existing and planned land use, neighborhood access needs, and multi-modal connectivity opportunities.

B. COMMUNITIES AND NEIGHBORHOODS

If a decision is made to go forward with the proposed HST system, alignments would be refined in consultation with local governments and planning agencies, with consideration given to minimizing barrier effects in order to maintain neighborhood integrity. Potential mitigation strategies to reduce the effects of any new barriers would be considered at the project-level environmental review and could include grade separating planned rail lines and streets, new pedestrian crossings, new cross-connection points, improved visual quality of project facilities, and traffic management plans to maintain access during and after construction.

C. PROPERTY

Potential land use displacement and property acquisition (temporary use and/or permanent and non-residential property) are expected to be avoided to the extent feasible by considering further alignment adjustments and design changes in the future at the project level. In addition, analysis at the project level would consider relocation assistance in accordance with the Federal Uniform Relocation and Real Property Acquisition Policies Act of 1970.

D. ENVIRONMENTAL JUSTICE

On a system-wide basis, it is not expected that the proposed HST system would result in disproportionate adverse effects to minority or low-income populations. If a decision is made to pursue the development of the proposed HST system, additional consideration of environmental justice issues would occur during project-level review, which would include consideration of potential localized impacts and potential benefits to and enhancements for communities along potential HST alignments. Project-level review would include consideration of detailed mitigation measures, including mitigation for temporary construction-related impacts. Project-level review would also include outreach to potentially affected communities as part of the public review process.

3.7.6 Subsequent Analysis

Should the HST Alternative be selected, the subsequent environmental evaluations and project-level review of proposed segments and facilities would address the need for the following studies.

- Land use studies for specific alignment and station areas potentially impacted, including evaluation of potential land use conversion, potential growth, and potential community benefits.
- Review of localized potential environmental justice issues.
- Relocation impact analysis for potentially displaced housing and businesses.
- Pedestrian and vehicular circulation studies.